

over a period of 22 years had made the club an object of his affection and devotion.

To him golf was more than a game or a fleeting pastime. He appreciated the game in its finer aspects, knew it to be an opportunity for the close comradeship of the links, realized that the spirit of the rule was more often to be observed than the letter, and he believed that the honor of the game was not limited to the first shot at each tee, but extended from the first tee to the last hole. In his passing the game has lost one of its real leaders.

---

### Appointment of Dr. John Montieth, Jr.

We are pleased to announce that Dr. John Montieth, Jr., who is well known to readers of THE BULLETIN as a result of his excellent work on turf grass diseases, has recently been employed by the United States Golf Association Green Section. He entered upon his new duties on April 1, and is to have charge of the research work. Dr. Monteith's past training and experience and his interest in turf grass problems fit him admirably for these investigations, and we confidently look forward to accomplishments that will be of great value to golf courses.

---

### Effects of Individual Fertilizer Materials on Soil Reaction

By O. J. Noer, Madison, Wis.

Individual fertilizer materials affect soil reaction differently, some intensify and others reduce the acidity. In any program designed to modify soil reaction these specific effects must be considered.

The soluble acids dissolved in the soil water produce marked effects on vegetation, and the development of this acidity depends upon the presence in the soil of insoluble acids. It is the minute clay particles which become acid in character. In non-acid soils the clay is saturated with calcium, but additional calcium may be present in the form of lime carbonate. Until all the lime carbonate and appreciable amounts of the calcium saturating the clay are removed, soluble acidity will not develop. In humid regions the percolating waters, as they pass down through the soil, leach out calcium and the residual clay particles eventually become acid. Fortunately those materials which cause acidity accelerate the removal of calcium and thus hasten development of insoluble acids, the reservoir from which soluble acids are formed.

The insoluble clay is a complex salt exhibiting acid properties when its basic calcium is removed. Mineral fertilizers are also salts, containing an acidic and basic portion, and are usually water soluble. Those capable of yielding soluble acids contain a basic portion which the insoluble acid clay can absorb, leaving the soluble acid dissolved in the soil water. The basic material absorbed by the clay reduces its acid producing power, but re-resolution usually takes place, especially if the basic portion is ammonia or potassium and leaves the clay unimpaired in acid properties.

The organic fertilizers have little effect on soil reaction until broken down into simpler substances by the soil micro-organisms, and any changes that do occur are therefore secondary, resulting